DRAFT

AFGHANISTAN'S POPULATION

Demographic Data
For
Planning and Reconstruction

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D R A F T

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I. The Bases For Afghanistan's Population Estimation

A. Background.

Afghanistan is one of the very few mid-size to large countries which has never had a population census. This situation is not for want of trying on the part of many Afghans and donors. It relates rather to the sheer logistical, and more lately, political and military difficulties in mounting an accurate census operation not to mention the costs of such an operation relative to other pressing humanitarian and economic needs of one of the poorest countries on earth. A review of all efforts to enumerate the population of Afghanistan is not germane at this point. What this work intends to do is to draw together the various fugitive and sometimes conflicting estimates of Afghanistan's population size, growth rate and demographic parameters, test them against each other for reasonableness, lay out the basis for population estimates, state the assumptions under which these have been derived, (so that as new information is derived, analysis may explore the implications of this new information), and finally develop the best possible estimates of the population inside Afghanistan by Woleswali (district) and outside Afghanistan in refugee status. It must be recognized that numerous groups have interests in seeing various elements of this population estimated, and that these interests usually extend to seeing that the population elements of concern to them are as large as possible. This has always been the case, and is not new to the present situation. References are included in a bibliography, but it should be noted that only those references which have some empirical, grounded base rather than those of a speculative nature, are included in this analysis. At every point where a data set or number is utilized, there is a basis for using it, although there will always be those who claim that base is not correct. The analysis which follows uses all of the empirically based information from 1973 to present, and clearly states the process and rationale by which these numbers are evaluated and utilized. What is perhaps surprising given the diversity of views of the size of the population of the country inside and out is that there is a remarkable internal consistency to the numbers and analysis which results.

B. The Afghan Demographic Studies (ADS) Project, 1971-1975.

The first comprehensive and field based nation wide scientific estimate of the size and demographic parameters of the Afghan population was carried out by the U.S. Agency for International Development in conjunction with the Ministry of Planning and later the Central Statistics Office (CSO) ofthe Government of Afghanistan from 1971-1975. This exercise at its peak numbered in excess of 300 Afghans all with prior qualifications and

on-the-job training in one or more of the major aspects of a census/survey operation. The task set for ADS was principally that of determining knowledge, attitude and practice of family planning among different sub-sets of the Afghan population. An additional real concern was the size of the population to which these parameters applied. The task of estimating the normal demographic parameters of the Afghan population (eg. age and sex structure, fertility, mortality, morbidity, household size, educational attainment, occupation, etc.) would have been challenging enough under the circumstances. However, it could be handled by a scientifically conducted survey. The problem was that there was no census to act as a sampling frame for such a survey and hence ADS had the doubly challenging task of estimating not only the parameters but the total size and spatial distribution of the population. The ADS survey, as a survey, had the great strength, compared to later efforts, that it was confined to a sample of the population living in urban areas, rural areas, and nomadic camps. Since the survey was confined to a finite number of cities, villages, and camps, quality control could be relatively high. Use of air photos and mapping techniques which would have been prohibitive for a full scale census could be carried out for the selected sample areas. Training of staff, follow-up and quality control could similarly be greater than would be possible under a census. The great problem with the Afghan Demographic Studies, at least as far as estimating the size of the population was concerned, was the necessity of extrapolating from the known and sampled urban areas, villages, and nomad camps to a much larger subset of unsampled urban areas and villages and camps. Numerous techniques were utilized to make this expansion, as is noted in the bibliography.

If anyone had known the actual size of the Afghan population, then ADS survey estimates could have been broken into the usual components of sampling and non-sampling errors. Under a census, sampling error in theory would be non-existent, but non-sampling error could, and under the prevailing circumstances doubtlessly would, have been very large. Thus the population size estimates generated by ADS may well have been as accurate or more accurate than any census which could have been undertaken under prevailing cost, and logistic constraints. Nonetheless doubts persisted because this was a survey and not a census. With informal estimates of Afghanistan's population ranging as high as 19 million in 1975, results which showed a settled population slightly exceeding 10 million (85% rural), which had the deleterious effect from the Afghan point of view of conceivably removing the country from the "poorest of the poor" per capita category and thereby reducing foreign assistance were treated with some suspicion. So too were results which reduced the country's significance relative to larger neighbors. Many non-technical experts rushed in with "corrections" to increase the population. To the credit of the Afghan Government and the technical and administrative cadre who supervised or were counterparts to the ADS operation, there was no effort to "condition" the results and nothing but full cooperation was received from numerous Afghan organizations. It should be noted that questions of ethnicity were not raised. Given the irregular fit of "ethnicity" and "language", and the high degree of ethnic inter-marriage in many communities. Existing ethnic breakdowns are principally based upon Soviet ethnographics.

Some procedural but non-technical discussion of the ADS operations needs to be covered here in order to understand the basis from which projections of the Afghan population to 1990 are derived. More detailed and technical description of operations can be pursued in the items in the bibliography. Considerable reliance was placed on a high quality set of topographic maps with village names which had been the result of a joint American, Soviet and Afghan Cartographic Institute mapping project commenced in 1956. Estimates of farmers by district, carried out by the

Ministry of Agriculture and Irrigation, areas under Malaria Eradication Program surveillance below six thousand feet, and the issuance of Tazkira (work permits) by the Ministry of Interior provided the base by which sample clusters in urban and rural areas could be derived and by which expansion from the sample to the non-sampled population could be made. Maps of district bordes were prepared at various scales. Efforts assured that the mapped districts covered the country completely and without overlap. These maps and the resulting code numbers have formed the basis of later maps and statistical compilations since that time, and have been used in this study and elsewhere in current relief programs.

Urban areas were mapped and air photographed, and major parts of them prelisted and subjected to carefully controlled household, and pregnancy history interviewings by male and female Afghan interviewers. This allowed more or less direct estimation of urban population as defined by the Ministry of Interior.

The rural zone was somewhat more difficult. Here an approach of geographic stratification was used in which a panel of experts who had traveled to all parts of Afghanistan and who understood the requirements of the sampling design classified each district according to ethnicity, agricultural practices, population density, physical characteristics (including water distribution) and other measures. This exercise was based upon various maps and other descriptions of rural Afghanistan assembled for the panel. The twenty seven population/agricultural strata which resulted are referred to hereafter as "rural zones". A size substratification into apparent large and small villages based upon work permitsissued, or other size measures in areas where work permits had not been issued (principally the Pakhtoon border areas) was laid upon the geographic strata. This was known as the size substrata. Samples of villages from each geographic strata and size substrata were statistically selected from various village lists and 1:100,000 maps. Selected villages were air photographed. At this point urban zone procedures of ground mapping, prelisting,household interviews, schedule operations, pregnancy history schedule operations and quality control follow up studies were made. The statistical estimating procedure then looked at the external size measures for the sample villages versus the known population and extended these estimates in ratio models to the non-sample villages to build up estimates of the population in each geographic strata and size substrata.

The results of the urban and rural surveys were published at a national level, and at the insistance of the Government of Afghanistan authorities, at a province level as well. There was statistical reluctance to push the estimates to finer divisions (rural zones and districts) set against practical planning needs in the fields of health, education, agriculture and other sectors to know the population by smaller units.

The nomadic population presented even greater challenges than the urban and rural settled populations. Undeniably, there was a nomadic component to the population which could not be ignored if the population of Afghanistan was to be accurately estimated. There were several practical problems in estimating the nomadic component. The first was the large degree of semi-nomadism common in rural Afghanistan in which whole families or parts of families travel for part of the year to areas away from their permanent residences to pursue better pastures, upland farming or trade. Secondly, because of the visual impact of tents, other non-permanent dwellings and of nomadic caravans on the move, spotted at several points by different observers, there was a tendency to overestimate the size of the nomadic populations. ADS for over 2 years invested considerable effort in the field, and in literature searches in attempting to develop a base from

which a nomadic survey could be attempted. Conceptually, nomads had to be considered as the complement of the settled populations. In practice this meant that people living in non-permanent residences in the summer of 1974, the time at which the nomads survey actually took place, could be considered as nomads but only if they had not passed the previous winter in a fixed residence in a village. In the latter case, they would have had a chance of being selected in the settled survey operations (and in some cases "semi-nomads" living in tents had in fact been interviewed in fixed villages the previous year) and would thus have been double counted. Considerable effort was expended in removing these "semi-nomads" and reducing the possibility of double counting. Actual procedures for the nomads survey are covered elsewhere, but basically area sampling was used in which an estimated number of tents, based upon past experience, was plotted for the summer months in all districts. A tent density stratum was lain on maps, and sampled Woleswalis picked accordingly. Survey results were not published but the sample area stratum expansion indicated slightly over 1 million true nomads in the summer of 1974.

C. Central Statistics Office (CSO) "Census" of 1978-1979.

Faced with internal and external needs for an accurate population count, the Peoples Democratic Party of Afghanistan (PDPA) regime launched an ambitious effort at a complete census in 1978 and 1979 with United Nations assistance. The methods of prelisting and pre-estimating populations were derived from the methods used by ADS and in many cases were carried out by Afghan government employees trained by ADS. The degree of completeness of pre-census operations is not known in detail. Censuses were carried out in perhaps 60 of the country's 325 Wolewalis and Alaqadaris. Objections to military conscription and undesired social reforms led to armed resistance in the rural areas culminating in open revolt with the Soviet invasion of Afghanistan. These actions brought the '78-'79 census exercise to a halt. Nonetheless, in a laudable effort, the CSO employees utilized the best information available, including it is believed, a new Tazkira (registration) campaign launched in 1977, to provide estimates of the size and demographic parameters of the Afghan population. This was published in a bulletin in 1981 but again at a provincial level rather than at the more meaningful, from a regional and sectoral planning view point, district level. An attempt was made to estimate the nomadic population although it can be assumed that many were accounted for in fixed residences. The nomadic population was "announced" at 2,500,000 even, with some embarrassment by the CSO staff in the published bulletin. The Afghan official charged with nomad operations said the actual figure was 800,000 true nomads and 500,000 migrant workers and semi-nomads included in the settled population which was estimated in 1979 at 13,051,358 (again 85% rural).

II. Derivation of the Afghan Population in 1979.

A. Use of ADS Sources.

Recourse was made for this study to printouts of the 1975 data tapes modified slightly from those received from the State University of New York contractor by an independent computer consultant employed by A.I.D. Results from each sample village were assigned to a geographic stratum and size substratum. The relationship between the sampled village populations and Tazkiras was expanded by the number of Tazkiras in each of the strata and substrata. The allocation protocol (expander used by ADS) was recalculated and used to estimate the total rural population by rural zone and size substrata which together added up to the ADS announced national total. A further allocation broke these numbers into 325 districts and sub-districts (Woleswalis/Alaqadaris). It should be noted

here that the procedures reproduced the ADS national level result, but are not necessarily valid at the Woleswali level, especially for non-sampled Woleswalis. The procedure used all information judged reliable in the ADS operations.

Because of urban and rural definition problems, the 1973 urban and rural populations by districts were summed. These were then multiplied by an acknowledged 4.6% undercount derived from quality control re-interviews and mapping and the observed 2.2% rate of natural increase to derive ADS population estimates by district as of 1974. The Nomad population was multiplied, in the lack of further information, by the same 4.6% undercount to achieve a revised ADS 1974 estimate, broken down for the first time by the 325 districts of the country plus nomads. Under an assumption of no change, these were then multiplied by the observed 2.2% population growth rate compounded from 1974 - 1979.

B. Incorporation of CSO Sources.

At this point, unpublished district level results in Dari, concordant with the previously announced 1979 census results by province, were made available through refugee sources. These figures were recoded by the ADS province and district code and incorporated in the data base. The correspondence of the 1979 CSO districts to the 1974 ADS districts was perfect in more than 90% of the cases, and where this was not true, due to combination or realignments of districts by the PDPA, apportioning measures were used based upon existing information and consultation with Afghans from the concerned areas.

C. Demographic Adjustment.

The CSO quoted a 2.6% annual growth rate which is too high according to most trained demographic observers of Afghanistan. Recourse was subsequently made to a demographic technique which utilized not the observed rates of natural increase of 2.2% as determined by ADS nor the 2.6% published by CSO but rates inherent in the age, sex distributions as reported by the two data sources. In other words, rather than using the reported birth and death rates to project population growth, resort was made to the age and sex distributions. The technique derives what the rate of natural increase would have to be between two time periods to generate the observed age and sex ratios. The result was that 2.4% was considered to be the rate of natural increase which best represented the observed age - sex distribution. It should be noted that the age - sex distribution derived in one year intervals by ADS showed characteristic "tucks" at the 0 to 4 age limit meaning underreporting of infants (since there was no reason to assume dramatic changes in infant mortality or family planning practice in those 4 years) and marked preference for 5 and 10 year age increments. Such results are common in non-literate populations despite numerous efforts made in the field to prevent and ultimately quality-control this problem. Hence the ADS age - sex pyramids were subjected to standard methods of demographic smoothing before being utilized in the inherent growth rate technique. Furthermore, the strongly male dominant sex ratio of the ADS survey, 116 males to 100 females, was some cause for concern to both the ADS staff and later observers. In the quality control reinterviewing, ADS attempted to check on these results but came up with no major change and concurred that the male dominant sex ratio was in fact real and not a statistical artifact due to undercounting of females. Rather, it was felt that minor undercounting of females in the 0 to 4 age group was augmented by real, not apparent, differential female mortality,

especially maternal mortality. Polygamy as it turned out was rare but serial polygamy in which old men in the village were married to their third or fourth wife, much younger than they, was quite common as previous wives had died in child birth.

There was internal evidence that the age - sex distribution of the 1979 CSO study had already been subjected to demographic smoothing before publication. The author and colleague analysts none the less feel that the 2.4% growth rate is the best estimate between 1974 - 1979. Thus the ADS 1973 population already incremented by the 4.6% undercount and the 2.2% observed growth to 1974 was incremented not at 2.2% but at 2.4% to reach a 1979 total which was 6 1/2% lower than the settled population as estimated by the CSO, and in fact higher than the CSO population if the ADS estimate for nomads was included. The CSO settled estimate was still somewhat higher than the upward revised ADS estimate and was thus scaled back district by district to provide a common base in 1979.

Note that fortuitously, the commonly used 5 year demographic interval is also the interval between the '73/'74 ADS survey and the '78/'79 CSO "census". Thus the ADS cohort of 5 to 9 year olds should be the CSO cohort of 10 - 14 year olds. As no births, but some deaths can occur in the 5 year interval, if the CSO cohort is larger than the 5 year anterior ADS cohort, there is evidence of some combination of under-reporting in one or over-reporting in the others. In general this was not the case accept for extreme age periods, which lends some credence to the internal consistancy of the two results. Independently, other observers starting from a higher base and using a lower rate of natural increase have arrived at virtually the same estimates of population 1979. We are thus reasonably content in our estimate of the settled population in Afghanistan in the benchmark year of 1979, coincident with the Soviet invasion and the start of the major resistance warfare and refugee out-migration.

III. Afghanistan's 1990 Population, Inside and out.

A. Projections Excluding Refugees

The passage from 1979 to 1990 population estimates of the country as a whole and above all for its constituent districts is fraught with even greater uncertainties. Nonetheless, the procedure is the same. The results use all empirically grounded data which is available and produce resultswhich are not inconsistant with these data. The procedures by which the results are obtained are clearly labelled such that if anyone wishes to use other assumption or is in possession of better sets of data in the future, the results may be shifted accordingly.

As a first step, the 1979 ADS and CSO estimates were adjusted and apportioned to the same data base and compared district by district on an absolute and percentage basis with these results printed and mapped. As noted above, maps, at various scales, of district boundaries had been produced as part of the ADS survey in 1973 and in one form or another have been used by organizations since that time. A 1973 map was redrafted, corrected and reissued at scales of 1:1,000,000 and 1:500,000 showing district borders, names and code numbers. It has been reproduced for this study and can be overlain on existing aeronautic/topograhic charts and remote imagery photo-maps of the country.

In general, the two 1979 estimates were very close in the northern and central areas of Afghanistan, and in fact in these areas CSO staff may have been duplicating elements of the work that were carried out for this study.

In the border areas, the results were often more highly divergent. These were the same areas lacking Tazkiras in 1973 where other and less reliable size measures had to be used by the ADS study. On the other hand, there were internal political reasons for inflating these numbers by the PDRA regime at the time. The differences between the two estimates were retained in our data base in order to make final adjustments to the 1990 population based on any other information subsequently available. If there were systematic biases in either the ADS or CSO figures, these would be reduced by averaging the two. Where the two figures were close, the averaging process would make little difference, and where the two were far apart the averaging process would in general reduce the error implicit in accepting one set of figures versus the others.

The average figures were then projected by a compound gross rate of 2.4%, the previously determined inherent growth rate as of 1979, to 1990. This result was then reduced by 5%. This 5%, across the board reduction was applied to all rural and urban districts. The 2.4% figure represents steady state growth as if nothing had happened between 1979 and 1990, a patently false notion but one which would be corrected at a later point. The 5% incremental death rate utilized at the end is, like most assumptions here, open to challenge but defensible. Direct combat deaths, deaths due to disruption of livelihood and shelter, deaths of children following deaths of their parents, deteriorating food, shelter and medical supplies and, for the refugees the rigors of migration clearly caused incremental deaths. The only measure of this was an estimated 9.3% death rate, verging on "decimation", determined by a survey of Pakistan refugees. The authors of that study believe that this figure also applies to those who remained in the country but have no empirical basis for stating this. Indeed, they note that major disruptions to refugees occurred in the year of their flight, thus the 9.3% rate seems too high to apply to the entire country. The utilization of this 9.3 (or 10%) death rate has given rise to the notion of more than 1 million Afghans being killed in the war. This is an emotional issue and one treads here with trepidation and sensitivity to the undoubted deaths and hardships which have occurred. None the less, the 9.3% rate seems too high, as when combined with known refugee out-migrations it leads to negative populations in a large number of districts. In short, the zero percent is too low, 10% appears to high, and 5% is what has be used in this study. For whatever it is worth statistically, this equals 795,258 incremental war deaths. A higher number is possible, perhaps likely.

B. Refugees in Pakistan.

The 2.4% compound growth rate less 5% incremental deaths assumes no migration ie. no Afghan refugees when it is known that Afghans represent the largest national concentration of refugees in the world today. In this study, the Government of Pakistan official numbers are used. These numbers are viewed with skepticism by many observers but no internally consistent better set of numbers can be provided, even after numerous consultations. Indicators have been advanced that the number is both far too small and far too large. Instances of over reporting to receive greater support of food and funds are reported anecdotally at all levels. Some duplicate registration doubtlessly occurred. Some families moved from Peshawar to Quetta or elsewhere to doubly register. Counterfeit ration cards or other fraudulently issued cards cannot be ruled out. Secondary markets and cards for those who have already returned to Afghanistan may be another issue. All of these argue that the official figure, on at least the base upon which it was built is too high.

There is however, a battery of countervening facts which indicate that the official figures or at least the growth rates applied to the base may be too low. Registration stopped the summer of 1988. New refugees have been coming in since then in greater numbers than those returning. Many refugees have either left the camps or bypassed the camps and merged into larger Pakistani society and thus could not have been counted. Others have quietly merged with clansmen on the Pakistan side of the Durand line. UNHCR provides food based on a maximum of 6 people per household. However, all indications of household size in Afghanistan prior to the migration, in adjacent and ethnically similar areas of Pakistan, and in the UN's own reports on household size in the refugee camps indicate that the average size of household is considerably above 6 and may be as high as 8.77. Finally, infant mortality has been reduced by the application of primary health care methods in the camps. And, as is common in most war situations, the birth rate has increased and, according to what evidence exists is now among the highest in the world for Afghan refugee women. If one views the camps, men may have gone back to Afghanistan to fight, farm or trade, or may have sought work elsewhere in Pakistan. Women are kept in Purdah, but no one can miss the scores of children, many of them now ten years out of their homeland or who have never seen their homeland -- the "lost generation" of Afghan children whose fate so concerns Afghan elders and donors.

Unfortunately, no comprehensive census and demographic survey of the refugee camps has been made so the issue of number of refugees as well as the number of incremental deaths in Afghanistan will never be fully known. The UNHCR did however attempt a count of household heads in and around each camp (thus including some but not all unregistered refugees) to determine the area from Afghanistan from which they came and hence to which they would likely return. This is the UNHCR Origin Survey of which the second and more accurate version has been used in this study. After clearly spurious records had been removed, we have an estimate of 445,796 verifiable heads of households, by district of residence in Afghanistan and by camps in Pakistan. In the first case this was multiplied by the UN average household size estimate of 8.77 and this number subtracted from the 1990 population projection of their home district. Like the 10% incremental death rate, this figure again yielded too many negative populations. The figure of six people per household was clearly too low. The official figure of 3,271,304 divided by the counted number of households instead led to an average household size of 7.3 which is consistent with figures in rural Afghanistan, adjacent parts of Pakistan and such information as we have on household size in the camps. This, then, is some internal verification of the correctness of the official figures for the number of refugees.

These estimated number of refugees by district were then subtracted from the 1990 projected population by district to arrive at a first approximation of the current population. At this point, two additional modifications were made to the data base. Each district was sorted according to its rural zone as derived and proven useful in the Afghan Demographic Studies surveys. These 27 zones are more homogenous units of analysis than the provinces which, by definition, are heterogeneous crossing numerous ethnic, physical and agricultural zones. Secondly, it was assumed that no district could currently have less than 20% of its projected 1990 population. Some place among the ruins or poked up the valleys in the most war ravaged districts, at least 20% of the projected population is still alive. The problem then became one of adjusting districts with "negative" populations or populations below 20% of the 1990 projections once the reputed number of refugees had been subtracted. When these anomalous districts were mapped, it became apparent that many of the

refugees in answering the UNHCR's origin question may not have answered for their home district but rather the point from which they exited Afghanistan eg. Jaji, Torkham, Assadabad, or some well known point not far from the border eg. Khost, Sarobi, etc. The biggest anomalies were again in the border areas where population estimates were least secure and most divergent between the two base sources. Thus some movement of populations within the rural zones was required. Note again as a test of the reality of these zones, one province, Paktia, showed up with a negative population while none of the zones showed up with a "negative" population before these adjustments were made. A further discussion of this seems worthwhile.

The rural zones most affected by "negative" population are known to be winter pasture areas for nomads. This fact combined with the above noted propensity for heads of households to name the place from which they left Afghanistan rather than the place where they actually lived explains most of the anomalies. Furthermore, the internally displaced non-nomads also gather in these staging areas prior to crossing the borders into Pakistan or to be able to do so depending upon conditions, especially food supply. Both nomads and the internally displaced are especially subject to this concentration close to the borders and sources of external support given their lost livelihood (livestock, farms, and urban occupations). Other negative figures are due to refugees listing the dominant Woleswalis or Loy Woleswalis in their areas rather than the sub-districts (Alaqadaris) which are also represented in the data base. Thus some readjustment of nomads and internally displaced populations within the rural zones was needed to remove "negative" district and sub-district populations without, as has been noted, changing the projected population of the zone itself, except by "allocating" nomads to border areas.

C. Refugees in Iran and elsewhere.

This is argueably the largest data lacuna in the analysis. Note that 2.2 million is the number commonly used. This is also reportedly the number of people in Kabul, as well as the annual growth rate in 1973. There is emperical basis for the latter, but not the former two of these numbers. The Iranian government has been slow to conduct any studies or release detailed internally consistant or verifable information on the numbers of Afghans in Iran. If we assume 2.2 million is correct, a further conceptual breakdown is possible. Many migrated before 1978/1979 and are effectively integrated into Iranian society. Many who travelled after that date will not return. The Afghan population in Iran tends to be male dominant and working in cities, with a few planned camps in the Seistan Desert adjacent to Afghanistan. These camps are probably the most likely source of return migration to Afghanistan but their numbers are unknown. An iterative and Delphic procedure was used to assign these unknown number of refugees to their unknown sources in Afghanistan. Relative levels of migration by rural zone were developed by panel discussions with Afghans in much the same manner used for the derivation of the ADS rural zones. Areas where the percentage of migration were highest were those closest to the Afghan border and central Shia areas populated heavily by Hazaras. Subtracting 2 million presumed Iranian refugees from these target areas again produced too many negative remaining populations. One million seemed too low a number given the information that we do have from Iran. Slightly less than 1.5 million (1.277 million) is the figure used, prorated among the rural zones according to the above distance and ethnicity/religion categories as agreed upon with panels of Afghans from the affected region.

D. Internally Displaced.

This is another set of numbers which is missing and will never be known. Internal displacements, that is internal refugees, doubtlessly run into the millions. Tautologically and inferentially, some statements can still be made. 1. A person either remains or moves. 2. If he moves, he either crosses the border out of Afghanistan or not. 3. If he has moved to Pakistan, Iran or elsewhere he has been roughly accounted for previously. 4. If he has moved internally over a long distance he has most likely moved to Kabul, the national capital, the largest metropolitan area and by all anecdotal accounts the PDPA city most swollen with new arrivals. 5. Other movements tend to be local and short distance, either to (a) urban areas under PDPA control or (b) to rural areas away from conscription and fighting or (c) to secure resistance-held border areas to receive food or stage themselves for future return or continued flight to Pakistan or Iran. Beyond step 3 above, the population of metropolitan Kabul behind PDPA lines (step 4) is estimated below. There is no realistic way to assign probabilities to steps 5a - c.

E. Kabul and Other Urban Areas.

Kabul and its immediate contiguous districts was projected to about 1.1 million, higher if the CSO figures are given greater weight than the ADS figures. Again 2 or 2.2 million is the figure commonly heard although as noted, there is no empirical base for this number. Reports indicate considerable urban crowding and new construction and reconstruction of old winter damaged houses in the hills within the city limits. But, the same features where noted in the 70s. Furthermore the most current migration trend is currently outward. Taking Kabul city and the contiguous areas, those largely within the PDPA lines, and projecting the higher 1979 CSO base at 5% per year instead of 2.4% without removal of the 5% incremental war deaths, yields a figure of 1,787,894 higher than the base projections, but lower than the unsubstantiated 2 plus million figure. At hostilities end, this may be the easiest figure to verify.

Most anecdotal reports indicate that the second and third cities of Afghanistan, Kandahar and Herat, were if anything depopulated. However both Kandahar and Herat sit in the midst of well populated, fertile and heavily fought over adjacent rural areas. These also have suffered war damage with many people fleeing into the hills and up valleys to avoid the fighting or to avoid conscription into the PDPA armies. However the situation for the total metropolitan populations of Kandahar and Herat and their immediately contiguous rural areas is not known in detail. Clearly both urban trade and rural production are taking place in and near these two cities as well as in Mazar-e-Sharif and Pule Khumri which remain largely untouched by the war. Kunduz and Baghlan provinces, including the districts surrounding the capital cities, have shown heavy out-migration. The population of Jalababad has always fluctuated, being higher in the winter than in the summer.

F. Areas Under PDPA Control.

The summation of the populations of all cities including the outlying areas within their districts, known to be under the control of the PDPA total about 4 million people. This is probably on the high side as most of the rural areas of the districts containing the cities are known to be in resistance hands. Thus 4 million is considered to be the upper limit of areas under PDPA control.

G. Demographic Parameters.

The age - sex ratio and household size according to several comparable data sets are presented in the Annexes. The age - sex distributions by percent according to the ADS and CSO sources are also presented. With appropriate allowance for error both in the age - sex distribution and in the individual district population estimates, one can apply these percentages to a district or districts in order to make a rough estimate of target populations eg. school age children, and women or children at health risk and hence needed targets for an MCH/EPI campaigns.

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A N N E X I I

Some Comparisons of Demographic Measures for Afghanistan and NWFP/Balochistan (Pakistan)

	Area Sq.Km.	Population (000)	
		('72)	('81)
NWFP	74521	8392	11061
Balochistan	347190	2432	4332
	421711	10824	15395
		('73)	('79)
Afghanistan	636265	10180	13053

			Surveyed Growth Rate % Per Year		
			Total	Rural	Urban
1973	ADS	CBR	4.30	4.40	3.80
		CDR	2.10	2.24	1.30?
		NI	2.20	2.16	2.50
1979	CSO	CBR	4.80?	5.00?	4.00
		CDR	2.20	2.30	1.80
		NI	2.60	2.70	2.20

Note: the CSO birth rate appears too high. Most likely estimate 2.40.

	Apparent Population Growth Rates % Per Year	
NWFP/Balochistan	'72 - '81	3.99
Afghanistan (Settled)		
ADS '73 Unadjusted	'73 - '79	4.23
CSO '79 Unadjusted		
ADS '74 Adjusted	'74 - '79	3.70
CSO '79 Unadjusted		
Inherent	'74 - '79	2.40
ADS '74 Adjusted		(used for projection
CSO '79 Adjusted		to '90)

		Household Size			
973	ADS	6.23 Total	1972	NWFP	6.1
		6.17 Rural		Balochistan	6.3
		6.60 Urban			
1979	CSO	6.19 Total	1981	NWFP	6.87
		6.16 Rural		Balochistan	7.34
		6.31 Urban			
1988	UN	8.55 (Unadj.)			
(Refugees)		8.77 (Adj.)			
1989 UN Origin Survey		7.33 (Derived) -- See Annex III.			

			Sex Ratio				
1973	ADS	115.6 Total	1972	NWFP	109.4		
		115.9 Rural			108.3		
		113.9 Urban			113.2		
1979	CSO	105.8 Total	1981	NWFP	108.7	Baloc.	111.5
		105.3 Rural			107.3		109.8
		109.0 Urban			117.1		121.0
1988 UN		95.4 Unadj.					
Refugees		94.5 Adj.					

A N N E X I I I

AFGHAN REFUGEES POPULATION STATISTICS

(SOURCE SAFRON, GOVT. OF PAKISTAN)

DATE	NWFP	BALUCHISTAN	PUNJAB	TOTAL
Dec 1988	2,238,905	835,650	180,032	3,254,587
Jan 1989				
Feb 1989	2,238,825	835,723	170,934	3,254,482
Mar 1989	2,240,601	836,055	170,903	3,256,559
Apr 1989	2,236,931			
May 1989	2,239,393	841,936	189,841	3,261,170
Jun 1989	2,240,421	842,032	170,841	3,262,294
Jul 1989	2,239,290	841,964	179,644	3,262,103
Aug 1989	2,240,261	842,201	179,641	3,262,103
Sep 1989	2,240,529	842,259	170,631	3,262,419
Oct 1989	2,241,702	850,026	179,578	3,271,304

Household size = 7.33 (UNHCR Origin Survey)
Refugees = 3,271,304
Heads of Household 445,796 (UNHCR Origin Survey)